

Claims

[c1] **What is claimed is:**

1.A secure flash memory device for a computer, the flash memory device comprising:

a connection port for electrically connecting the flash memory device to the computer;

a microcontroller electrically connected to the connection port;

a flash memory electrically connected to the microcontroller; and

a pre-installed security program for limiting access to the flash memory; wherein when the flash memory device receives flash memory access requests from the computer, a pass code stored in the computer is compared with a predetermined code stored in the flash memory device in a form understandable by the security program to enable the microcontroller to prevent data from being exchanged between the connection port and the flash memory when the pass code does not equal the predetermined code and to enable the microcontroller to allow data to be exchanged between the connection port and the flash memory when the pass code equals the predetermined code.

[c2] 2.The flash memory device of claim 1 wherein the security program is executed by the computer when the microcontroller receives flash memory access requests from the connection port.

[c3] 3.The flash memory device of claim 1 wherein the flash memory device is divided into a plurality of partitions and the security program determines how information can be exchanged between the connection port and each partition.

[c4] 4.The flash memory device of claim 1 wherein the predetermined code is capable of being set by a user.

[c5] 5.The flash memory device of claim 1 wherein the predetermined code is encrypted.

[c6] 6.The flash memory device of claim 1 wherein the predetermined code is stored in the microcontroller.

[c7] 7.The flash memory device of claim 1 wherein the predetermined code is stored in the flash memory.

[c8] 8.The flash memory device of claim 1 wherein the security program is stored in the microcontroller.

[c9] 9.The flash memory device of claim 1 wherein the security program is stored in the flash memory.

[c10] 10.The flash memory device of claim 1 wherein a portion of the security program is stored in the flash memory and another portion of the security program is stored in the microcontroller.

[c11] 11.The flash memory device of claim 1 wherein the security program issues commands to a graphical user interface (GUI) of the computer.

[c12] 12.The flash memory device of claim 1 wherein the connection port is a universal serial bus (USB) port.

[c13] 13.The flash memory device of claim 1 wherein the connection port is an integrated drive electronics (IDE) port.

[c14] 14.The flash memory device of claim 1 wherein the security program is written in hypertext markup language (HTML).

[c15] 15.A method for providing security to a flash memory device, the flash memory device comprising a flash memory, a connection port, a microcontroller coupling the flash memory and the connection port, and a security program, the method comprising:
pre-installing at least a portion of the security program into the microcontroller;
executing the security program;
accepting a pass code through the security program; and
comparing the entered pass code with a predetermined pass code.

[c16] 16.The method of claim 15 further comprising:
preventing access to the flash memory device if the pass code does not equal the predetermined pass code.

17. The method of claim 15 further comprising:
allowing access to the flash memory device if the pass code equals the
predetermined pass code.

[c18] 18. The method of claim 15 wherein the security program is written in hypertext
markup language (HTML).

[c19] 19. A method for providing security to a flash memory device, the flash memory
device comprising a flash memory, a connection port, and a microcontroller
coupling the flash memory and the connection port, the method comprising:
installing a security program written in hypertext markup language (HTML) into
the microcontroller;
executing the security program;
accepting a pass code through the security program;
comparing the entered pass code with a predetermined pass code; and
controlling access to the flash memory device based on the comparison.